MODELS: Lockheed 14-N, 14-N2, 14-N3, 14 PCLM

T.C. NUMBER: ATC 683

I - Specifications Pertinent to All Models

Placard speeds	Level flight or climb - 240 mph True Ind. Glide or dive - 284 mph True Ind. Flaps extended - 115 mph True Ind.
Fuel capacity	644 gallons (4 tanks in center section wings; 2 front tanks at 150 gallons each (-20.5) and 2 rear tanks not including fuel system at 172 gallons each (+22.5) (See NOTE 4)
Oil capacity	44 gallons (1 tank in each nacelle at 22 gallons each (-52.5) not including capacity of oil system)
No. passengers	11 (See Item 119 for location) (Standard crew 2, pilots at (-52.5) (See Item 222)
Baggage	Maximum capacity of compartments: (See NOTE 1) No. 1 - Nose compartment 1500 lbs. (-133.5) No. 2 - Forward belly compartment 800 lbs. (-68.5) No. 3 - Mid belly compartment 400 lbs. (-20.5) No. 4 - Rear belly compartment 700 lbs. (+30.5) Ballast compartment 350 lbs. (+230.5)
C.G. limits	(-0.3) and (+6.6) Level for weighing on main cabin floor or window line. MAC is 115.84 in. (L.E. MAC is 32.75 in. forward of spar center line)
Certification basis	Approved Type Certificate No. 683
Serial Nos.	1416 and 1503 only eligible. Approval expired 1/21/41. Army surplus Hudson type are not eligible under the terms of this spec.

EQUIPMENT:

(Datum is spar center line on under side of wing) (* Means net increase)

Class I:

101.	Two engine ring cowls (Lockheed Drawing 54022-4)	112 lbs.	(-89)

102.	Two exhaust collector rings (Lockheed Drawing 53506B)	117 lbs.	(-60)
103.	Two oil radiators (UAP 9)	50 lbs.	(-41)
104.	Two vacuum pumps (Pesco 207, Type B-3)	10 lbs.	(-76)
105.	Fuel analyzer (Cambridge) (exhaust gas)	12 lbs.	(-42.5)
106.	Two starters (Eclipse E-160)	60 lbs.	(-68)
107.	Constant speed propeller control	20 lbs.	(-98)
108.	Generator (Eclipse E-5)	36 lbs.	(-75)
109.	Battery (Exide 6-FHM-13)	75 lbs.	(-47)
110.	(a) Pressure fire extinguisher (Lux type 36-1)	25 lbs.	(-58)
	(b) Lux fire extinguisher hand type	8 lbs.	(+177)
111.	15.00-16 wheels (Goodyear 16 HBM)	123 lbs.	(-28.5)
112.	(a) 15.00-16 (Goodyear) 8-ply heavy duty tires	171 lbs.	(-28.5)
	(b) 15.00-16 plain tire tubes	29 lbs.	(-28.5)
113.	Shock struts (Aerol XY-450L)	277 lbs.	(-28.5)
114.	18 in. streamline tail wheel and (Goodyear) 6-ply heavy duty tire	17 lbs.	(+327)
115.	Tail wheel shock strut (Aerol B250L)	27 lbs.	(+314)
116.	Heating system (Lockheed 57005)	61 lbs.	(+57)
117.	Ventilating system	57 lbs.	(+57)
118.	Instruments and panel (Refer to West Coast Branch for itemized list dated 3/1/38)	56 lbs.	(-83)
119.	Eleven standard passenger chairs (-16.5, -16.5, +26.5, +26.5, +61.5, +65.5, +96.5, +104.5, +131.5, +143.5, +166.5) (Roman numerals in parenthesis following the item number signify number of seats removed)	53 lbs. each	

Class II:

200.	Miscellaneous items as noted in approved weight and balance report.		
201.	Two retracting landing lights in wing	11 lbs.	(-12)
202.	Two exhaust collector rings (Solar 12-459)	122 lbs.	(-60)
203.	Two flares and brackets (International)	50 lbs.	(+277)
204.	(a) Lavatory equipment including 3 gallons water	62 lbs.	(+211)
205.	(a) Two flash lights in cockpit	3 lbs.	(-69)
206.	Automatic pilot	80 lbs.	(-65)
207.	(a) 2-1/2 gallon propeller anti-icer fluid tank and lines	6 lbs.	(-110)
	(b) Propeller anti-icer pump	5 lbs.	(-107.5)
	(c) Spinners and slinger rings	24 lbs.	(-107.5)
	(d) Propeller and anti-icer fluid (3 gallons)	24 lbs.	(-103)
208.	Extra generator (Eclipse E-5)	36 lbs.	(-75)
209.	Extra battery (Exide 6-FHM-13)	75 lbs.	(-47)
210.	(a) Two one pint fire extinguishers (Pyrene)	10 lbs.	(-60)
	(b) Lux fire extinguisher - hand type (extra)	8 lbs.	(-60)
211.	Two landing gear strut recess flaps	16 lbs.	(-25)
212.	(a) 15.00-16 cactus proof tire liners	25 lbs.*	(-28.5)
	(b) 18 in. cactus proof tail wheel tire liner	5 lbs.*	(+327)
213.	Heavy type landing gear drag struts	4 lbs.*	(-12)
214.	18 in. streamline tail wheel (dural replacing magnesium)	5 lbs.*	(+327)
215.	Dump valve installation in accordance with Lockheed Drawings No. 58019 and 58007) (See NOTE 7)	18 lbs.*	(+8)
216.	(a) Radio receiver RA-1A (25 lbs.), RA-4A (15 lbs.)	40 lbs.	(-58)
	(b) Radio receiver RA-2A	23 lbs.	(+253)
	(c) Radio transmitter TA-2C	43 lbs.	(+253)
	(d) Radio loop and direction finder coupler	10 lbs.	(-56)
	(e) Antenna reel, shaft and control	19 lbs.	(+240)
	(f) Vee aerial	6 lbs.	(+70)
	(g) Radio power unit, wiring, etc. (rear)	137 lbs.	(+32)
	(h) Range receiver RA-4)	15 lbs.	(+253)
	(i) Radio power unit, wiring, etc. (forward)	114 lbs.	(-8)
	(j) Radio loop installation (with control unit)	16 lbs.	(-167)
217.	(a) Cabin carpet (Service)	36 lbs.	(+65)

	(b)	Cabin carpet (special heavy type, replacing standard)	19 lbs.*	(+65)
	(c)	Leather lavatory bench covering	5 lbs.	(+232)
	(d)	Cabin upholstery (Laidlow replacing linen)	20 lbs.*	(+50)
	(e)	Cabin carpet (shorter than service)	28 lbs.	(+55)
	(f)	Cabin mat, rubber	17 lbs.	(+166)
218.	(a)	Extra airspeed installation	4 lbs.	(-123)
	(b)	Special instruments replacing some of standard instruments (Refer to West Coast Branch for itemized list dated 3/18/38)	Net decrease 3 lbs.	
219.	(a)	Two passenger divan (Lockheed Drawing 50383)	104 lbs.	(+29.5)
	(b)	Chart table	46 lbs.	(+29.5)
	(c)	Card table and clamps	13 lbs.	(+172)
	(d)	Blue denim chair covers	6 lbs.	(+65)
	(e)	Three-passenger divan (Lockheed 59303) (+17.5, +40.5, +63.5)	93 lbs.	(+40.5)
	(f)	Clothes bench	2 lbs.	(+170)
	(g)	Map case (Lockheed 59293)	33 lbs.	(-21)
	(h)	Oxygen supply cabinet (Lockheed 59320)	11 lbs.	(-21)
220.	(a)	Two passenger foot stools (Drawing 59315)	19 lbs.	(+100)
	(b)	Passenger loading step	4 lbs.	(+160)
	(c)	Passenger interphone installation	2 lbs.	(+188)
	(d)	Passenger oxygen installation (Lockheed 58328)	5 lbs.	(+40)
	(e)	Passenger oxygen installation (Lockheed 58329)	64 lbs.	(+48)
221.	(a)	Deicer boot and removable equipment (wing) (See NOTE 8)	44 lbs.	(-22)
	(b)	Deicer boot and removable equipment (stabilizer) (See NOTE 8)	11 lbs.	(+268)
	(c)	Deicer boot and removable equipment (fin) (See NOTE 8)	11 lbs.	(+300)
222.		Folding type stewardess chair (See NOTE 2a)	16 lbs.	(+177)
223.		Plexiglass nose replacing metal nose	5 lbs.*	(-180)
224.		Addition of bronze and steel plates to Goodyear brake assembly	7 lbs.*	(-28.5)
225.		Bulkhead reinforcement, Fuselage Station 456 (Lockheed Drawing 50124E)	12 lbs.	(+268)
226.		Brake fluid gravity tank and fluid (Drawing 42402)	2 lbs.	(-88)
227.		Fuselage structural changes to accommodate camera (Lockheed Drawing 55560)	10 lbs.	(+85)
228.		Auxiliary battery	11 lbs.	(-32)
229.		Structural increase (consisting of changes in shock strut, side strut and drag strut per Drawings 55007D, 55053D and 55008C; also tail bulkhead fitting 50460A, stringer 19A and 20A extended per Drawing 50050G, windshield revisions per Drawing 50565A and 50801, window frame gussets per Drawing 50050G, new emergency exit per Drawing 50063, and miscellaneous center section and wing increases per Drawing 51000F)	56 lbs.	(-5)
230.		Zinc chromate primer (Interior)	20 lbs.	(+20)
231.		New flap actuating cylinder, maximum operating pressure 600 p.s.i. (Lokcheed Drawing 51851)	4 lbs.*	(+67.5)
232.		W.A.C. dynamic suspension engine mount used in conjunction with Hamilton Standard propeller, hub 3E50, blades 6111-12 (W.A.C. Drawing LS 7199)	11 lbs.*	(-77)
233.		Fuselage reinforcements in No. 1 baggage compartment (Lockheed Service Bulletin No. 14-38)	6 lbs.	(-104)
234.		Radio operator's seat installation (Lockheed Drawing 55450)	21 lbs.	(-30.5)
235.		Toe brake installation (Lockheed Drawing 55380)	38 lbs.*	(-88)
236.		Fixed wing-slots installation (All placard ceilings reduced 130 ft. when this item is installed)	25 lbs.	(-7)

237.	Hamilton Standard Hydromatic propeller installation (replacing controllable constant speed propeller) hubs 23E50, blades 6139A-12, low pitch setting 22 degrees at propeller station 42 (in accordance with Lockheed Drawing 54270 and Hamilton Standard wiring diagram No. SK 3676) (For Model 14-N)	141 lbs.*	(-81)

Class III:

301.	(a) Deicer installation (wing and tail) fixed portion (See NOTE 8)	25 lbs.	(0)
302.	Emergency wheel lowering device (independent oil-draulic system, manually operated)	8 lbs.	(0)

NOTE 1. Weight and balance report including list of equipment included in certificated weight empty, and loading instructions when necessary, must be submitted for each aircraft with original inspector's report and each subsequent report covering change in equipment.

NOTE 2.

(a) Stewardess' seat limited to 130 lbs., not to be occupied by passengers. Placard accordingly.

(b) Placard lavatory door as follows: "This room not to be occupied during take-off and landing."

NOTE 3. Eligible for export, at standard weight, as follows subject to inspection for equipment specified in Chapter XII of Inspection Handbook (7/19/39):

(a) Canada
- Landplane
- Skiplane - not eligible. However, structure complies with Canadian ski gear requirements provided that the geometry of the ski gear is in accordance with Lockheed Report No. 954.

(b) All other countries except Australia.

NOTE 4. The following placards must be installed in locations noted: (In lieu of posting such placards, and subject to the approval of the Chief, Air Carrier Inspection Section, definite instructions must be issued by the operator to assure compliance therewith.)

(a) At the fuel tank selector valve: "All fuel (to within 2 or 3 gallons) shall be used from each tank in the order listed below before using fuel from succeeding tank: Right Front, Left Rear, Left Front, Right Rear."

(b) At fuel tank filler caps: "In filling fuel tank, care must be observed to ascertain that tanks are full in the following order: Right Rear, Left Front, Left Rear, Right Front."

NOTE 5. Tab ranges are limited as follows:

Rudder Tab, Trim Travel Move to Right 25 degrees. Servo Travel Move to Right 6 degrees 10 feet.

Rudder Tab, trim Travel Move to Left 25 degrees. Servo Travel Move to Left 6 degrees 5 feet.

Elevator Tab, Trim Travel Up 25 degrees. Servo Travel Down 11 degrees 30 feet.

Elevator Tab, Trim Travel Down 25 degrees. Servo Travel Up 5 degrees 35 feet.

Aileron, Trim Travel (L.H. tab only) Up 26 degrees, Down 24 degrees 30 feet.

As measured from a neutral position 5 degrees down from chord plane of aileron.

Servo Travel Down 17 degrees. Servo Travel Up 1 degree.

NOTE 6. Relief valve in hydraulic flap operating system must be set to open at from 850 lbs. per square inch to 1000 lbs. per square inch, unless Item Number 231 is installed.

NOTE 7.

A. If provisions other than Item 215 are made for dumping, the fuel dump valves shall be made positively inoperative.

B. If Item 215 (which complies with FI-11c) is installed, the airworthiness certificate shall incorporate one of the following statements, as the case may be:

(1) Non-Airline Carrier. "Fuel shall not be dumped except in accordance with the provisions of CAR 60.900."

(2) Airline Carrier.

(a) With Authorized weight in excess of standard - "Landing shall not be made at a weight in excess of standard except in accordance with CAR 61.7811. Fuel shall not be dumped except in accordance with CAR 61.7811 and

then only if the pilot deems it safer than landing at a weight in excess of standard."

(b) With authorized weight not in excess of standard - "Fuel shall not be dumped except in accordance with CAR 61.7811."

NOTE 8. Standard (and provisional) weight may be increased 93 lbs. when complete de-icer is installed.

II - Model 14-N, Designation 14 PCLM:

Engines	2 Wright Cyclones GR-1820G-105
Placard limits	
Fuel:	
90 minimum octane (CFR)	Maximum, except take-off: At sea level 36.7 in. Hg., 2200 rpm (900 hp) (Low impeller ratio)
90 minimum octane (CFR)	At 6000 ft. 35.0 in. Hg., 2200 rpm (900 hp) (Low impeller ratio)
95 minimum octane (CFR)	At 11000 ft. 36.0 in. Hg., 2200 rpm (750 hp) (High impeller ratio)
95 minimum octane (CFR)	At 17000 ft. 33.0 in. Hg., 2200 rpm (750 hp) (High impeller ratio)
	Takeoff (one minute):
90 minimum octane (CFR)	43.0 in. Hg., 2200 rpm (1100 hp)
Propellers	2 controllable metal, constant speed (Hamilton Standard hubs 3E50, blades 6111-12, low pitch setting 18 degrees) 695 lbs. (-107.5) (See Item 237)
Placard ceiling	10500 ft. usable, in standard air, at 16650 lbs. at an indicated airspeed of 110 mph with either engine inoperative, the inoperative propeller fully feathered and the remaining engine operating at full throttle at 2200 rpm (See items 236 and 237)
Weights	Empty - Use actual (approximately 10940 lbs. (-6.12) as 13 PCLM with Class I items only)
	Standard - 15650 lbs. (See NOTE 7)
	Provisional - 17500 lbs. (See NOTE 7)

III - Model 14-N2 - Designation 14 PCLM

(Same as Model 14-N except for change in engines 16 lbs. net decrease)

Engines	2 Wright Cyclones GR-18200-102
Placard limits	
Fuel:	
90 minimum octane (CFR)	Maximum, except takeoff: At sea level 36.7 in. Hg., 2200 rpm (900 hp) With straight line variation with altitude to 6000 ft. 35.0 in. Hg., 2200 rpm (900 hp)
90 minimum octane (CFR)	Takeoff (one minute): At sea level 43.0 in. Hg., 2200 rpm (1100 hp)
Propellers	2 controllable metal, constant speed (Hamilton Standard, hubs 3E50, blades 6111-12, low pitch setting 18 degrees) 695 lbs. (-107.5)
Placard ceiling	10500 ft. usable, in standard air, at 15650 lbs. at an indicated airspeed of 110 mph with either engine inoperative, the inoperative propeller idling at 760 rpm in high pitch, and the remaining engine operating at full throttle at 2200 rpm (See Item 236)
Weights	Empty - Use actual (approximately 10925 lbs. (-6.06) as 13 PCLM with Class I items only)
	Standard - 15650 lbs. (See NOTE 7)
	Provisional - 17500 lbs. (See NOTE 7)

IV - Model 14-N3 - Designation 14 PCLM

(Same as Model 14-N except for change in engines 0 lbs.* and propellers 145 lbs.*)

Engines	2 Wright Cyclones GR-1820G-105A
Placard limits	
Fuel:	
90 minimum octane (CFR)	Maximum, except takeoff: At sea level 37.5 in.Hg., 2300 rpm (900 hp) (Low impeller ratio)
	At 6700 ft. 35.4 in.Hg., 2300 rpm (900 hp) (Low impeller ratio)

	At 11000 ft. 36 in. Hg., 2300 rpm (775 hp) (High impeller ratio)
	At 17300 ft. 33.6 in. Hg., 2300 rpm (775 hp) (High impeller ratio)
90 minimum octane (CFR)	Takeoff (one minute) 43.5 in. Hg., 2350 rpm (1100 hp)
Propellers	2 Constant speed full feathering hydromatic (Lockheed Drawing 54270) (Hamilton Standard hubs 23E50, blades 6139A-12; low pitch setting 18 degrees) 840 lbs. (-104)
Placard ceiling	16000 ft. usable, in standard air at 15650 lbs. at an indicated airspeed of 110 mph with any engine inoperative, the inoperative propeller fully feathered and the remaining engine operating at 2300 rpm and 34 in.Hg., manifold pressure (with supercharger operating in high impeller 10.1 gear ratio (See Item 236)
Weights	Empty - Use actual (approximately 11085 lbs. (-7.18) as 13 PCLM with Class I items only) Standard - 15650 lbs. (See NOTE 7) Provisional - 17500 lbs. (See NOTE 7)